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The Role of Weight, Race, and Health Care Experiences in Care Use among Young Men and Women

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Abstract

Objective—Increases in overweight and obesity (O/O)-related morbidities and health care costs raise questions about how weight influences patients' health care use and care experiences. Past research has been inconsistent; however, prior study designs and samples have limited exploration of how this association might be influenced by gender, race, and the joint impact of these factors.

Design—This analysis of 1,036 young, relatively healthy, ethnically diverse, insured adults assessed the influence of O/O, gender, and race on, and the role of health care experiences in primary and preventive care use over a 12-month period.

Results—The association of weight status with care use differed by gender. O/O men used more primary care visits; O/O women used fewer preventive care visits than their healthy weight counterparts. O/O men had poorer health care experiences than healthy weight men. African-American women reported poorer experiences, but those who were O/O reported greater trust in their provider. Care experience ratings did not explain the associations between BMI and care use.

Conclusion—Gender, race and visit type together provide a context for O/O patient's care that may not be explained by care experiences. This context must be considered in efforts to encourage appropriate use of services.

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Conflicts of Interest

The authors have no conflicts of interest to report.

SP and HD conceived the study, all authors contributed to analysis planning and data interpretation. All authors were involved in writing the paper and had final approval of the submitted and published versions.

Keywords

Health care experiences; Health care utilization; overweight; obesity; race

Introduction

Rates of overweight and obesity continue to increase worldwide (1). Concurrently, obesity occurs at progressively younger ages (2). These trends contribute to worldwide increases in chronic diseases including Type II diabetes and coronary heart disease (2). Increased obesity rates also have a disproportionate effect among some minority groups where disparities already exist in chronic disease rates (3). This is compounded with a growing concern about overweight and obesity related health care costs. Reports have estimated that obesity/overweight and its disease sequelae account for over \$190 Billion, or over 20%, of annual medical care spending in the U.S. (4).

The evidence supporting the association of weight status with use of health care services is inconsistent and varies by type of health care used. Non-prevention related primary care visits are typically illness or injury-related, and can reflect a patient's level of wellness. Prior research has shown higher use of primary care among individuals who are overweight or obese (5, 6), although some report less use or no difference (7, 8). For preventive care visits (also called wellness visits or annual physicals), that include specific clinical preventive services (e.g., tobacco cessation counseling, cervical cancer screenings), there is an ongoing debate as to whether overweight and obese individuals use differential amounts of care than healthy weight individuals (9–12). These visits are particularly important because they provide an avenue for healthy individuals to address prevention topics with their health care teams, and they present opportunities to discuss the maintenance of healthy body weight and address overweight and obesity issues.

Inconsistencies observed in the associations of overweight with health care use may be attributed to differences between studies on the factors posited in Aday and Andersen's framework to underlie care use (13). Studies have targeted populations receiving health care in widely variable delivery systems (e.g., Veterans Affairs clinics, Medicare enrollees). Furthermore, samples have differed considerably on predisposing population characteristics including gender, age, and race/ethnicity. Studies have often described older populations and those with significant illness burden. In addition, many have included largely non-Hispanic White populations despite well documented high rates of obesity and co-morbid disease among several minority groups. These factors have been shown to influence health care use directly, and also through mechanisms like illness burden and means to access care (14).

Aday and Andersen's framework also depicts how care utilization can be influenced by patients' subjective satisfaction with health care, which is underpinned by their health care experiences. Indeed, it has long been suggested that some types of preventive care visits and service use may be lower among overweight and obese individuals because of negative, stigma-related interpersonal experiences and low satisfaction with physicians (7, 15). However, evidence of this relationship is limited, and exploration has been based on self-report data. Health care experiences and resulting satisfaction are important outcomes in

their own right that have been linked to patient care outcomes (16, 17). On the whole, the literature investigating the association between patient body weight and experiences or satisfaction with care is mixed (15, 18–23). More importantly, the question of whether subjective care experiences explain the relationship between body weight and actual, prospective care use has not been investigated.

To date, no one has evaluated the association of weight status with health care experiences and primary and preventive health care use among a sample of relatively healthy, young men and women wherein minority representation has been optimized for assessing the influence of patient race. To this end, we analyzed data from the Multiplex Initiative, a population-based study.

Our primary research questions were:

1. Does the number of *primary care* and/or *preventive-care visits* in a 12-month window differ for women and men who are healthy weight, overweight, and obese, and do these associations differ by racial background?
2. Do women and men who are categorized as healthy weight, overweight, and obese differ in their health care experiences, and do these associations differ by racial background?
3. Do baseline subjective health care experiences explain the associations between BMI category and racial category on prospective care use?

Methods and Procedures

Participants

Data for this analysis came from the baseline telephone survey and clinical service use extraction from automated patient records performed as part of the Multiplex Initiative (MI). The MI assessed individuals' interest in and reaction to multiplex genetic testing for common chronic diseases. MI participants were recruited from the Henry Ford Health System in Detroit, Michigan. Sampling and recruitment for the overall project are described elsewhere (24). Briefly, MI participants were randomly sampled. They were between 25–40 years old and commercially insured by the Henry Ford Health System health maintenance plan. Males, African Americans, and individuals living in neighborhoods with lower education levels were oversampled. Participants with a personal history of diabetes, coronary heart disease, osteoporosis, colorectal cancer, lung cancer, and non-melanoma skin cancer were excluded. For this analysis, we additionally excluded individuals who were pregnant (n=25), reported a racial category other than White/Caucasian or Black/African American (n=113), were underweight (n=7), did not have a regular personal doctor (n=397) or had not seen their regular personal doctor within the 12 months prior to survey (n=122), and were not continuously enrolled in the health plan and therefore did not have utilization data extracted (n=249) (25). An additional ten participants were missing BMI data and were excluded from analyses. The final sample included in this analysis consisted of 1036 individuals: 576 women and 460 men.

Demographic and health indicators

Participants' age, self-reported height, weight, race/ethnicity, education level and perceived health status were assessed at baseline. Weight category was based on whether participants' body mass index (BMI) was healthy weight (between 20kg/m² and 25kg/m²), overweight (between 25 kg/m² and 30 kg/m²), or obese (equal to or greater than 30 kg/m²). Education level categories included high school or less, some college, and college or more. Perceived health status was measured with a single item asking participants to rate their health right now (1–4 scale where 1=poor and 4=excellent).

Measures: Utilization of primary and preventive care visits

Information about participants' use of health care services was extracted from automated health service records (25). Visit counts for general primary care office visits and for the independent subset of preventive care office visits were used in the current analysis. Classification of visits into categories was based on standard CPT billing codes. Visit counts were aggregated for a 12-month period prior to baseline (retrospective), and a separate 12-month period following the survey (prospective). Analyses focused on prospective care use.

Measures: Health Care Experience

At baseline, participants' experience with their health care provider was assessed using 5 items from the Ambulatory Care Experiences Survey (26). Items covered four domains of primary care experiences: whole person orientation, interpersonal treatment, trust, and patient-provider communication. Item content is available in Table 4. One additional item assessed preventive care experiences, or whether participants felt they got the help they needed from their provider to change their habits (1–4 scale, 1 = “yes, definitely”, 2 = “yes, somewhat”, 3=“no, definitely not”, and 4 = “I do not need help”). Participants were dropped from the analyses including this item if they indicated that they did not need help (n=229). This resulted in a continuous variable ranging from 1–3.

Data Analysis

All analyses were performed separately for males and females due to gender differences in health care utilization (27) and weight-related health care experiences (22). Linear regressions were conducted with BMI, race, and a BMI-by-race interaction term to predict each care experience domain individually. Separate regressions were conducted to assess main effects of BMI and race without the interaction term in the model. Covariates included age, education, perceived health status, and retrospective care use. The same analytic process was followed to assess the association of BMI category and race with prospective care use. Covariates included age, education, perceived health status, and whether participants took the multiplex genetic test offered by the MI.

Finally, negative binomial regression models were conducted with the same covariates to assess the association between BMI category and race with prospective care use while adjusting for health care experiences. Health care experiences were assessed as a composite variable containing all general experience items due to multicollinearity concerns. A factor analysis indicated that all general experience items belonged to one factor, and the item

assessing preventive care experiences belonged to a second factor. Preventive care experiences were entered only into models that assessed prospective preventive care use.

Results

Descriptive statistics for participant characteristics are presented in Table 1.

Utilization of Primary and Preventive care Visits

Variation in prospective health care use is presented in Table 2. Eighty-five percent of women and 75% of men had at least one primary care visit in the 12-month prospective period. Fifty-eight percent of women and 39% men had at least one preventive care visit in the period.

We assessed whether BMI category, race category, and the interaction predicted prospective utilization of primary care and preventive care (see Table 2 for means; Table 3 for unadjusted multivariate models). All interactions were non-significant. Among men, there was a significant main effect of BMI category on primary care utilization, $\chi^2=12.35$, $p=.002$. Healthy weight men had significantly fewer primary care visits than both overweight men and obese men, $t=-2.23$, $p=.026$ and $t=-2.76$, $p=.006$ respectively. There was also a non-significant trend toward more primary care visit use among white men, $\chi^2=3.50$, $p=.061$. There were no significant effects for preventive care.

Among women, there were no significant effects predicting primary care visits. There was a main effect of race on preventive care utilization, $\chi^2=5.45$, $p=.020$. African-American women had more preventive care visits than White women. The effect of BMI on preventive care visits did not reach significance, $\chi^2=5.82$, $p=.055$. However, planned contrasts revealed that healthy weight women had significantly more preventive care visits than overweight women; $t=2.35$, $p=.019$. Healthy weight women did not differ significantly from obese women.

Health Care Experiences

We assessed whether BMI category, race category, and the interaction were associated with care experiences (see Table 4 for means). There were no significant effects for the whole person orientation or the communication dimensions. For the interpersonal treatment dimension, among men the effect of BMI category on interpersonal treatment did not reach significance, $F(2,447)=2.77$, $p=.064$. However, planned contrasts revealed that healthy weight men reported significantly better interpersonal treatment than men who were overweight and obese; $t=2.03$, $p=.043$ and $t=2.26$, $p=.024$ respectively. There was no main effect of race and no interaction. Among women, White women reported better interpersonal treatment than African-American women, $F(1,567)=9.94$, $p=.002$. There was no main effect of BMI category and no interaction.

On the trust dimension, among men, there was a main effect of BMI category, $F(2,449)=3.81$, $p=.023$. Healthy weight men reported significantly greater trust than men who were overweight and obese; $t=2.02$, $p=.044$ and $t=2.76$, $p=.006$ respectively. There was no main effect of race or interaction. Among women, White women reported higher levels

of trust than African-American women, $F(1,566)=6.0, p=.015$. There was also a significant interaction between BMI category and race, $F(2,564)=3.24, p=.040$. Whereas for other groups trust was higher among healthy weight individuals, for African-American women, trust was lowest among healthy weight individuals and increased as weight increased. There was no main effect of BMI category.

Role of Health Care Experiences in Models Predicting Utilization

We assessed the association of BMI category and race with care use prospectively, including health care experiences at baseline in the model to predict care use patterns in the following 12 months (adjusted models in Table 3). All interactions were non-significant, and we therefore report only main effects models. Among men, for primary care, the addition of health care experiences did not affect the pattern of associations, nor were experiences related to care use. For preventive care, there was a marginal, non-significant association of care experiences [$\chi^2=3.09, p=.079$], and a significant association of preventive care experiences, [$\chi^2=6.27, p=.012$], with use. Other associations did not change in the adjusted model.

Among women, there was a significant association of care experiences with primary care use, $\chi^2=6.65, p=.010$. Other associations did not change in this adjusted model. For preventive care use, care experiences were not related, and preventive care experiences showed a nonsignificant, marginal association with use, $\chi^2=3.20, p=.073$. In the adjusted model, the association of BMI category with use became statistically significant [$\chi^2=7.03, p=.029$], and the association of race and care use remained significant.

Discussion

The current findings demonstrated that the associations of patient BMI and race with health care experiences and care utilization are associated with patient gender and the type of health care services used. Furthermore, although health care experiences were, in some cases, linked with prospective care use, those experience ratings did not explain the observed associations between BMI, race, and utilization.

Influence of Patient Weight and Race on Health Care Use

Overweight women were found to use fewer preventive care visits than healthy weight women. This is consistent with findings in the weight stigma literature wherein overweight women have reported avoiding or delaying preventive care (15). Well-woman visits are indicated and promoted for women in this age group, often for gynecological screening (28). However, preventive care visits may feel more discretionary and less urgent to patients. They are therefore likely to be a more sensitive indicator of lack of engagement or care avoidance. This pattern is concerning given that overweight patients are at increased risk for health conditions that could be influenced by early identification through adherence to prevention recommendations.

Overweight and obese men did use more primary care visits compared to healthy weight men. Increased care utilization among overweight individuals is often largely explained by illness burden; however the current sample were screened to be free of several common,

chronic diseases. Having a higher weight may also put patients at greater risk for acute injuries and illnesses (29). Although overweight and obese men in the sample used more primary care, these rates were still lower than women's primary care use, as is consistent with prior literature (30). The current analysis suggests that when men are obese, the gender gap in primary care use is decreased. Men's preventive care use did not differ by body weight. This is unsurprising as visit counts for preventive care among men were low. Furthermore, although preventive care could be beneficial in reducing obesity-associated health conditions that can drive use of general primary care visits, preventive care and screenings are not routinely promoted for men in this age group.

Patient race influenced care use for women. African-American women had more preventive care visits than White women. Although lower rates of utilization are typically reported among African-American women (31), the sample in the current analysis consisted of insured patients who saw their primary care doctor at least once in the last year. In addition, some contextual factors that may underlie reduced care among African Americans in other samples (e.g., having a regular source of care) were held constant in this study. Only a non-significant trend toward more primary care use among White men was found among males. The general lack of effect for men may have occurred for similar reasons as those discussed above.

The Role of Health Care Experiences

Previous reports have suggested that poor health care experiences among overweight and obese individuals are a primary cause for delay or avoidance of preventive health care (7, 15). Although we found that overweight women used less preventive care, our other analyses do not support this supposition. Overweight and obese women in the present sample reported care experiences that were just as positive as healthy weight women. Furthermore, accounting for health care experience ratings did not attenuate the association between BMI and prospective preventive care use. Although care experience ratings did predict *primary* care use among women, there were no differences in primary care use by BMI. It may be that stigmatizing events reported by overweight women previously are not captured by the experience indicators measured here. Reduced preventive care visits by women who are overweight or obese could be driven by other, unrelated aspects of care (e.g., body embarrassment, desire to avoid office equipment that is too small (15)).

Among men, the notion that overweight and obese individuals would report poorer experiences with their provider was supported for two satisfaction domains (interpersonal treatment and trust). Our findings are similar to those reported by Hebl and colleagues (22) who found overweight men reported lower health care satisfaction than average whereas overweight women did not. One possible explanation is that men are more rarely exposed to negative weight-related interactions and may be more sensitive to interactions that draw negative attention to weight (32) as can occur in the health care encounter. In addition, because men use less care and have fewer interactions with providers than women, any negative weight-related interactions may stand out more and be more damaging. While health care experiences ratings were associated with men's prospective preventive care use, these ratings did not explain the relationships between BMI, race and use.

Race was associated with care experiences only among women. African-American women reported poorer interpersonal treatment, consistent with prior literature (33, 34). It was indeed surprising that African-American men did not also report poorer health care experiences (35). There was also a weight-race interaction among women predicting trust in the provider. The lowest levels of trust were reported among healthy weight, African-American women, and trust increased with each weight category (overweight, obese) for these women. It is possible that overweight may have mitigated the typically lower levels of trust that African-American women place in health care providers (36). This could happen if, contrary to women's expectations, providers did not counsel or criticize these women about their weight. Providers are indeed less likely to discuss weight with African-American women than White women (37).

Limitations

Limitations included that we were not able to assess several factors that are known to impact patient experiences and utilization such as social concordance between doctors and patients. We were also unable to include patients who had not seen their personal doctor in the past 12 months due to the structure of data collection. Elements of experience were assessed by single or two-item measures as is typical of large data sets. Although we had prospective and retrospective objective care use data, care experiences were measured at a single time point. We were therefore unable to capture the dynamic, causal interplay between these variables. Finally, rates of care use were low in this sample of relatively healthy adults, and we had fewer men than women in the sample.

Implications and Conclusions

Our findings suggest that in order to understand the influence of body weight on health care utilization, we cannot consider overweight and obese individuals as a monolithic entity. Nor can we lump different types health care services together, or assume that prior experiences and satisfaction explain associations of body weight with care use or avoidance. Indeed, in this study the complexity of these interrelationships resulted in some counterintuitive results and may explain the observed inconsistencies of prior study findings. Efforts to understand how weight influences health care use are critically important both for improving health outcomes and reducing costs. Studies that get inside the interpersonal dynamics of the health care encounter to understand how providers respond to overweight patients and how these responses are influenced by patient or provider characteristics will be needed.

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What is already known about this subject

- The evidence supporting the association of weight status with use of health care services is inconsistent and varies by type of health care used. Prior study designs and samples have limited exploration of how this association might be influenced by care experiences, gender and race, and their joint impact on downstream health care use.
- Evidence is inconsistent regarding the potential mechanisms underlying these associations, particularly with regard to health care-related experiences and satisfaction.
- There is an assumption and some supporting self-report data suggesting that overweight individuals (particularly females) receive less preventive care because they have poor experiences with care and therefore avoid medical visits.

What this study adds

- The inconsistencies of research to date may be because the posited associations of patient weight with health care use and care experiences are overly simplistic.
- We found that the association of BMI with use and experiences of health care differs by gender, race and visit type (primary or preventive visits).
- Contrary to prior self-report-based findings, when assessing actual care use data, we found that health care experience ratings did not explain the association of weight or race with care use, regardless of participants' gender.

Table 1

Demographics and health status by gender, BMI and race. N(%) or Mean (SD).

Men					
	Healthy weight (n=86)	Overweight (n=199)	Obese (n=175)	White (n=176)	African American (n=284)
African American	45 (52%)	114 (57%)	125 (71%)	-	-
Education: college plus	40 (47%)	70 (35%)	50 (29%)	90 (51%)	70 (25%)
Education: some college	26 (30%)	75 (38%)	75 (43%)	46 (26%)	130 (46%)
Age	34.7 (4.25)	35.3 (3.59)	35.1 (3.95)	35.2 (3.75)	35.1 (3.93)
Perceived health status ^b	3.3 (.64)	3.1 (.56)	2.8 (.66)	3.1 (.60)	3.0 (.66)
Women					
	Healthy weight (n=178)	Overweight (n=181)	Obese (n=217)	White (n=236)	African American (n=340)
African American	75 (42%)	112 (62%)	153 (71%)	-	-
Education: college plus	83 (47%)	76 (42%)	72 (33%)	112 (48%)	119 (35%)
Education: some college	61 (34%)	66 (37%)	93 (43%)	82 (35%)	138 (41%)
Age	34.5 (4.52)	35.2 (3.6)	34.9 (3.76)	34.7 (4.06)	34.7 (3.90)
Perceived health status ^b	3.3 (.59)	3.1 (.59)	2.7 (.66)	3.1 (.58)	3.0 (.71)

^b 4-point scale from poor to excellent

Table 2

Prospective health care utilization by gender, BMI and race: Visit rates per 100 patients per year (with standard deviations)

Utilization Type	Gender/Race category	Healthy Weight	Overweight	Obese
Utilization of primary care: visit count	Women/White	339 (392)	364 (403)	384 (392)
	Women/African American	407 (472)	327 (317)	413 (391)
	Men/White	151 (152)	245 (286)	294 (352)
	Men/African American	127 (147)	213 (218)	238 (338)
Utilization of preventive care: visit count	Women/White	102 (128)	87 (106)	75 (101)
	Women/African American	133 (119)	96 (100)	109 (122)
	Men/White	54 (100)	58 (88)	50 (79)
	Men/African American	53 (76)	68 (96)	53 (77)

Table 3

Unadjusted and adjusted negative binomial regression models for men and women predicting utilization of primary and preventive care

UNADJUSTED MODELS – PRIMARY CARE										
Variable	DF	Men, Primary Care				Women, Primary Care				
		Estimate	Std Error	χ^2	p	Estimate	Std Error	χ^2	p	
Intercept	1	0.49	0.56	-	-	1.13	.42	-	-	
Race: White	2	.21	.11	3.5	.061 [†]	-.06	.09	.44	.51	
BMI: healthy		-.56	.16	12.35	.002*	-.10	.11	2.97	.23	
BMI: overweight	1	-.10	.12			-.18	.10			
Age	1	.014	.013	1.13	.29	.004	.01	.15	.70	
Education: High school or less	2	.18	.14	1.72	.42	.054	.11	.33	.85	
Education: Some college		.12	.12			.050	.094			
Perceived health	1	-.082	.08	1.03	.31	.037	.068	.30	.59	
Took multiplex test	1	-.093	.17	.31	.58	.079	.12	.47	.49	
UNADJUSTED MODELS – PREVENTIVE CARE										
Variable	DF	Men, Preventive Care				Women, Preventive Care				
		Estimate	Std Error	χ^2	p	Estimate	Std Error	χ^2	p	
Intercept	1	-1.30	.80	-	-	-.90	.49	-	-	
Race: White	1	-.09	.15	.36	.55	-.24	.10	5.45	.02*	
BMI: healthy	2	.016	.22	.17	.42	.21	.12	5.82	.055 [†]	
BMI: overweight		.19	.16			-.07	.12			
Age	1	.014	.019	.59	.44	.28	.01	5.43	.02*	
Education: High school or less	2	-.15	.19	1.0	.60	-.16	.13	1.84	.40	
Education: Some college		.023	.17			-.10	.11			
Perceived health	1	.073	.12	.39	.53	.027	.08	.12	.73	
Took multiplex test	1	-.065	.23	.08	.77	-.14	.14	1.13	.29	
ADJUSTED MODELS – PRIMARY CARE										
		Men, Primary Care				Women, Primary Care				

Variable	DF	Estimate	Std Error	χ^2	p	Estimate	Std Error	χ^2	p	Estimate	Std Error	χ^2	p
Intercept	1	.17	.66	-	-	.65	.46	-	-	.65	.46	-	-
Race: White	1	.21	.11	3.55	.059 [†]	-.084	.89	.88	.35	-.084	.89	.88	.35
BMI: healthy	2	-.057	.16	12.92	.002*	-.082	.11	2.62	.27	-.082	.11	2.62	.27
BMI: overweight		-.10	.12			-.17	.10			-.17	.10		
Age	1	.015	.013	1.27	.26	.0028	.01	.07	.79	.0028	.01	.07	.79
Education: High school or less	2	.16	.14	1.44	.49	.039	.11	.17	.92	.039	.11	.17	.92
Education: Some college		.11	.12			.034	.094			.034	.094		
Perceived health	1	-.089	.08	1.18	.28	.011	.068	.02	.88	.011	.068	.02	.88
Took multiplex test	1	-.10	.17	.35	.56	.11	.12	.86	.35	.11	.12	.86	.35
Experiences	1	.062	.067	.86	.35	.11	.044	6.65	.01*	.11	.044	6.65	.01*
ADJUSTED MODELS – PREVENTIVE CARE													
Variable	DF	Estimate	Std Error	χ^2	p	Estimate	Std Error	χ^2	p	Estimate	Std Error	χ^2	p
Intercept	1	-2.8	1.2	-	-	-.33	.72	-	-	-.33	.72	-	-
Race: White	1	-.05	.18	.08	.77	-.25	.12	4.72	.030*	-.25	.12	4.72	.030*
BMI: healthy	2	.0045	.25	1.6	.45	.25	.14	7.03	.029*	.25	.14	7.03	.029*
BMI: overweight		.21	.18			-.12	.13			-.12	.13		
Age	1	.006	.02	.08	.78	.03	.01	3.71	.054 [†]	.03	.01	3.71	.054 [†]
Education: High school or less	2	-.10	.22	1.0	.61	-.09	.14	.46	.79	-.09	.14	.46	.79
Education: Some college		.11	.19			-.016	.12			-.016	.12		
Perceived health	1	.09	.14	.45	.50	.048	.087	.30	.59	.048	.087	.30	.59
Took multiplex test	1	-.18	.47	.48	.49	-.30	.16	3.52	.061 [†]	-.30	.16	3.52	.061 [†]
Experiences	1	.44	.17	3.09	.079 [†]	-.06	.07	.64	.42	-.06	.07	.64	.42
Preventive care satisfaction	1	.44	.22	6.27	.012*	-.20	.11	3.20	.073 [†]	-.20	.11	3.20	.073 [†]

* p<.05,

[†] p<.10

Table 4

Health care experiences means and standard deviations by gender, BMI and Race

Item category and paraphrased wording ^a	Gender/Race category	Healthy Weight	Overweight	Obese
Whole Person Orientation: how often did doctor know important information about your medical history	Women/White	5.28 (1.08)	5.36 (1.06)	5.11 (1.27)
	Women/African American	5.11 (1.17)	5.15 (1.19)	5.25 (1.17)
	Men/White	5.54 (0.74)	5.01 (1.17)	5.00 (1.18)
	Men/African American	5.36 (1.11)	5.30 (1.08)	5.37 (1.03)
Interpersonal Treatment: how often did your doctor spend enough time with you	Women/White	5.42 (0.93)	5.54 (0.90)	5.27 (1.10)
	Women/African American	5.05 (1.17)	5.10 (1.35)	5.12 (1.30)
	Men/White	5.66 (0.76)	5.26 (1.06)	5.00 (1.31)
	Men/African American	5.40 (0.96)	5.10 (1.26)	5.06 (1.32)
Trust: how often did you feel you could tell doctor anything, even things might not tell anyone else	Women/White	5.14 (1.27)	4.83 (1.41)	4.92 (1.58)
	Women/African American	4.30 (1.77)	4.71 (1.67)	4.88 (1.55)
	Men/White	5.41 (1.43)	4.86 (1.44)	4.84 (1.56)
	Men/African American	5.24 (1.21)	4.95 (1.53)	4.62 (1.76)
Communication (2 items): how often did doctor listen carefully; how often did give clear instructions about what to do to take care of problems/symptoms	Women/White	5.54 (0.75)	5.56 (0.71)	5.36 (0.97)
	Women/African American	5.43 (0.94)	5.40 (1.02)	5.37 (0.99)
	Men/White	5.63 (0.70)	5.54 (0.63)	5.30 (1.01)
	Men/African American	5.63 (0.69)	5.46 (0.95)	5.45 (0.88)

^a All experiences items were assessed on a 1–6 scale